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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
FOURTEENTH FLOOR
IRVINE, CA 92614

EXAMINER

KENNY, STEPHEN

ART UNIT	PAPER NUMBER
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3726

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DATE MAILED: 08/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/916,948

Applicant(s)

HIROYUKI ET AL.

Examiner

Stephen J Kenny

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6,10,13,17,20,24 and 25 is/are allowed.
- 6) ☒ Claim(s) 1-5,7-9,11,12,14-16, 18, 19, and 21-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 7/27/01 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1- 5, 7-9, 11, 12, 14-16, 18-19, 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of Itoh et al (US Patent No 6225725).

Regarding claims 1-5, & 7, AAPA discloses positioning a rotor core within a die and filling slits in the rotor core with a resinous magnet, and applying a magnetic field to a resinous magnet in each slit to establish a magnetic orientation for the resinous magnet in each slit (applicant's page 1, paragraphs 0003 – 0004).

AAPA does not disclose positioning elements within the rotor core which prevent the core from moving under the influence of the magnetic field.

Itoh discloses a plurality of first positioning elements (53) that are disposed on an outside circumference of the core and aligned with a plurality of second positioning elements (38). These positioning elements are press fitted between adjacent pole piece laminates thereby preventing displacement (column 6, lines 3-18). These positioning elements are advantageous in that they ensure the uniformity of the core, which is essential for obtaining optimum performance. It is well known that a uniform air gap between the stator and rotor cores has a profound impact on the motor performance (i.e. efficiency, noise, etc.) With the use of such positioning elements the geometry of the rotor & stator cores can be maintained allowing for a

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uniform air gap between the two cores which is critical for the motor performance. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to form a rotor core within a die, filling the slits with resinous a magnet as disclosed by AAPA while using positioning elements on an outer circumference as taught by Itoh, in order to realize the advantages discussed above. Note, although Itoh's disclosure is directed to stator cores, both stator & rotor cores are formed by blanking & stacking laminates, and it is well known within the art that stator & rotor cores can be formed by the same processes. In fact Itoh indicates this fact by specifying that the disclosure is applicable for "a rotating apparatus" (column 6, line 20 & column 7, line 16 & 20) which includes rotor cores.

Regarding claims 8, 9, 11, 12, 14-16, 18-19, 21 AAPA/Ito discloses the claimed invention except for the various positioning element features claimed throughout claims 8, 9, 11, 12, 14-16, 18-19, 21 (e.g. a first positioning element formed on a face of the rotor core, a shaft hole having a keying portion, etc.). It would have been an obvious matter of design choice to form a positioning element comprising such features, since applicant has not disclosed that such features solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the positioning elements of AAPA/Ito. Note, if applicant argues that the various positioning element configurations of claims 8, 9, 11, 12, 14-16, 18-19, 21 are not a matter of design choice and instead are patentably distinct, then a species restriction will be raised in the following action, and applicant will be required to elect one species for examination.

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Regarding claims 22 & 23, AAPA discloses slits having first and second ends, a die with a plurality of magnets, positioning the rotor core in the die with the slits aligned with the poles of the magnets (applicant's page 1, paragraphs 0003-0004).

Allowable Subject Matter

Claims 6, 10, 13, 17, 20, 24, & 25 are allowed.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Response to Arguments

Applicant's arguments filed 4/18/03 have been fully considered but they are not persuasive.

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Applicant has put forth the argument that Itoh does not disclose a first positioning element on a rotor core or a second positioning element on a die. The examiner holds that, in as much as applicant has structurally defined the positioning elements in claims, Itoh does indeed disclose positioning elements as claimed by applicant.


In response to applicant's argument that the claimed invention is not directed to the maintenance of a rotor or stator geometry to allow for a uniform air gap between a stator and a rotor, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen J Kenny whose telephone number is 703-306-0359. The examiner can normally be reached on mon - fri 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Vidovich can be reached on 703-308-1513. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9302 for regular communications and 703-872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.

sk SK
August 7, 2003


GREGORY VIDOVIKH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700